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Geology Matters 2011: Growing the Economy

The geologic foundation of a province drives its economy, so the timing couldn't be better for Nova Scotia to have a record-breaking season for fieldwork and mineral exploration. In addition to commodities including coal, salt, gypsum, anhydrite, limestone, silica sand, quartz, dimension stone and peat, Nova Scotia is endowed with gold: lots of it! Currently worth more than \$1600 an ounce, the value of the suggested gold resources in the province is in the order of billions of dollars which, if developed, could provide much needed jobs to rural Nova Scotians and wealth to the province.

The Geology Matters 2011 conference will showcase the mineral wealth of Nova Scotia on October 24 and 25 at the Westin Hotel, Halifax. There will be displays and presentations by the Mineral Resources Branch, several partner organizations, universities, prospectors, Natural Resources Canada, and companies engaged in mineral exploration, development and mining. Initiatives of the new Department of Natural Resources (DNR) Strategy will be announced and there will be numerous guest speakers, two luncheons and the annual Minister's Reception and Awards Ceremony hosted by the Honourable Charlie Parker.

This year's conference will feature two workshops, one each afternoon running concurrently with the oral presentations. Back by popular demand is the Student Workshop on October 24. Students will learn about the many programs of the Mineral Resources Branch and employment opportunities in the geosciences. The Wetlands 101 Workshop on October 25 will include guest speakers and a panel discussion (see p. 6). Delegates will learn about wetlands in Nova Scotia and the province's wetland policies and regulations.

The program for Geology Matters 2011 follows on the next two pages. Come and learn about the vital role that geology plays in our lives, how it contributes to *Growing the Economy*, initiatives of the Natural Resources Strategy, and the exciting work and discoveries of DNR geoscientists and industry during the 2011 field season. Admission to the technical talks and displays is free. Tickets for the luncheons and reception can be purchased at the conference registration desk. For more information please contact the author by phone (902-424-3053) or email (webberde@gov.ns.ca).

Diane Webber



Participants enjoy a break in the poster suite during Geology Matters 2009.

Program for Geology Matters 2011

Monday, October 24

8:00 am - 3:00 pm **Registration**
8:00 am - 9:00 am **Coffee station sponsored by The Mining Society of Nova Scotia**
9:00 am **Exhibits Open**
9:00 am - 9:20 am **Opening Remarks, Duff Montgomerie, DNR**

Session 1: New Initiatives

9:20 am - 9:40 am ***The Natural Resources Strategy - Rob Naylor, DNR***
9:40 am - 10:00 am ***12% by 2015 - Bob Ryan, DNR***
10:00 am - 10:20 am ***Automation of the Registry of Mineral and Petroleum Titles - John MacNeil, DNR***

10:20 am - 10:40 am **Coffee break sponsored by Merrex Gold Inc.**

10:40 am - 11:00 am ***Land Asset Management Pilot Project - Dan Khan, DNR***
11:00 am - 11:20 am ***TGI-4, Targeted Geoscience Initiative - Mike Villeneuve, Natural Resources Canada***

Session 2: Exploration and Mining I

11:20 am - 11:40 am ***Canadian Exploration Industry Trends - Brad McBain, Accurassay Laboratories Ltd.***
11:40 am - 12:00 pm ***Volcanic Stratigraphy and Nature of Epithermal-style Gold Mineralization in Upper Devonian-Lower Carboniferous Rocks of the Northeastern Cobequids - Trevor MacHattie, DNR***

12:00 pm - 1:30 pm ***Luncheon - Guest Speaker David Haley, SNC-Lavalin Inc. - Lower Churchill Project - Overview of the Muskrat Falls Development***

1:30 pm - 1:50 pm ***Harrigan Cove Gold Deposit: a Fresh Perspective - Brendan Matheson, Stay Gold Inc.***
1:50 pm - 2:10 pm ***The Next One - Terry Coughlan, GoGold Resources***

Session 3: Energy

2:10 pm - 2:30 pm ***Forent Energy: an Exploration Update - Ian Shook, Forent Energy***
2:30 pm - 2:50 pm ***Carbon Capture and Storage - Carl Poirier, CCS Nova Scotia***

2:50 pm - 3:10 pm **Coffee break sponsored by Conestoga-Rovers & Associates**

3:10 pm - 3:30 pm ***Economic Implications of Tectonic Constraints in the Kennetcook Basin - Fraser Keppie, DNR***
3:30 pm - 3:50 pm ***The Global Coal Industry: Nova Scotia's Energy Plan and the Donkin Coal Project - Peter Akerley, Erdene Resource Development***

3:30 pm - 5:00 pm ***Student Workshop sponsored by Acadian Mining Corp. - Harbour Suites***

Session 4: Reclamation and Mining

3:50 pm - 4:10 pm ***Mine Reclamation - Fred Bonner, TBL Resource Solutions***
4:10 pm - 4:30 pm ***Surface Coal Mining Enhancement Initiative - Helen MacLeod, DNR***
4:30 pm - 4:50 pm ***Rockfall Mitigation - Michael Simons, Maccaferri Canada Ltd.***
4:50 pm - 5:30 pm **Networking in Commonwealth Ballroom**

5:30 pm - 7:30 pm **Reception and Awards Ceremony, Hosted by the Honourable Charlie Parker, Minister of Natural Resources. Sponsored by Conrad Brothers, Atlantic Cat, Dexter Construction, GoGold Resources, McInnes Cooper, National Gypsum and Pioneer Coal**

Program for Geology Matters 2011 (cont.)

Tuesday, October 25

8:00 am - 3:00 pm **Registration**
8:00 am - 9:00 am **Coffee station sponsored by the Mining Association of Nova Scotia**
9:00 am **Exhibits Open**
9:00 am - 9:10 am **Opening Remarks - TBA**

Session 5: Land-use Planning

9:10 am - 9:30 am **Defining a Space for Mineral Resource and Aggregate Development in Land-use Planning - Garth DeMont, DNR**
9:30 am - 9:50 am **Coal Age Galapagos: DNR Launches its Geoheritage Initiative - John Calder, DNR**

Session 6: Exploration and Mining II

9:50 am - 10:10 am **Mining Activities Update - Alan Davidson, DNR**

10:10 am - 10:30 am **Coffee break sponsored by Atlantic Gold NL**

10:30 am - 10:50 am **Atlantic Gold's Meguma Projects: an Update - Wally Bucknell, Atlantic Gold NL**
10:50 am - 11:10 am **Viewpoint of the Nova Scotia Mining Industry from the Mining Association of Nova Scotia (MANS) - Pat Mills, President, MANS**

11:10 am - 11:30 am **Prospectors' Report - Ron Mills, DNR**
11:30 am - 11:50 am **Of Prospectuses and Prospectors: Some Legal Gems for Mining Companies - Laurie Jones & Chris MacIntyre, McInnes Cooper**

12:00 pm - 1:30 pm **Luncheon - Guest Speaker Amanda Dillon, PDAC - Mining Matters: Bringing the Wonder of Canada's Geology and Mineral Resources to Canadian Educators and Students**

1:30 pm - 1:50 pm **Striking the Balance: Optimizing Turn-around Time and Quality Needs in Your Mineral Testing Programs - Brad McBain, Accurassay Laboratories Ltd.**

2:00 pm - 5:00 pm **Wetlands 101 Workshop co-sponsored by the Atlantic Chapter of the Canadian Land Reclamation Association and the Mining Association of Nova Scotia - Harbour Suites**

1:50 pm - 2:10 pm **Revised Stratigraphy and Tectonic Evolution of the Meguma Terrane - Chris White, DNR**
2:10 pm - 2:30 pm **Canada, a Beacon for Mining: 125th Anniversary for the Mining Society of Nova Scotia - Matt Ferguson, President, Mining Society of Nova Scotia**

2:30 pm - 2:50 pm **Coffee break sponsored by Selwyn Resources Ltd.**

2:50 pm - 3:10 pm **Title TBA - Jason Dunning, Selwyn Resources Ltd.**
3:10 pm - 3:30 pm **Understanding the Rocks: a Guide to Bedrock Aggregate Exploration in Nova Scotia - Garth Prime, DNR**

3:30 pm - 3:50 pm **Aggregates: the Cornerstone of Nova Scotia's Infrastructure - Scott Hoeg, Conestoga-Rovers & Associates**

3:50 pm - 4:10 pm **Greenlight's Project Updates: Nova Scotia - John Wightman, Greenlight Resources**
4:10 pm - 4:30 pm **Gold, Silver, Base Metals - Mike Taylor, Slam Exploration**
4:30 pm - 5:30 pm **Booths and Poster Displays in Commonwealth Ballroom**

5:30 pm **Conference Closes**

From the Mineral Inventory Files

Mooseland – Where and ‘Howe’ it all Began

Gold mining began in Nova Scotia in June 1860 at Mooseland, Halifax County. The precious metal was first discovered there in 1858 by British army officer Captain Champagn L'Estrange, who was moose hunting there with Mi'kmaq guide Joe Paul. This discovery went unheralded until Mr. Paul took Musquodoboit prospector John Gerrish Pulsifer to the site in June 1860. Pulsifer recognized the significance of the find and immediately travelled to Halifax to report the discovery and make claim to it. On his way to Halifax, Pulsifer stopped at Tangier village and made note of what might be similarly gold-mineralized veins there. A local farmer, Peter Mason, followed up on Pulsifer's advice and shortly thereafter turned up gold in these veins. The first gold rush of Nova Scotia was on!

Prior to 1860 the province did not have a gold mining industry. Big mining here consisted of coal mining in the rich coal basins of Cape Breton, New Glasgow and Springhill, and iron mining in Londonderry and the Annapolis Valley. Gold, and the incredible excitement it elicits, was new to Nova Scotia. The government was unprepared for a gold rush and, according to government writings of the day, they knew it. The province had no Mines Department and no staking system. Officials were aware of the positive effects of a gold industry but they were also aware of the stories of lawlessness and violence coming out of the California and Australia gold rushes of the 1840s. The government of Nova Scotia wanted to control the economic impacts and still maintain the rule of law.

At this point none other than Joseph Howe entered the story. Word of the discovery was spreading and people were on the move. Lieutenant Governor George Phipps instructed Howe, in his capacity as Provincial Secretary and, hence, responsible for mineral development, to visit Mooseland and report post haste. Howe, accompanied by King's College scientist Professor Henry How, left for Mooseland on June 30, 1860. Their two and a half day trek to Moose-

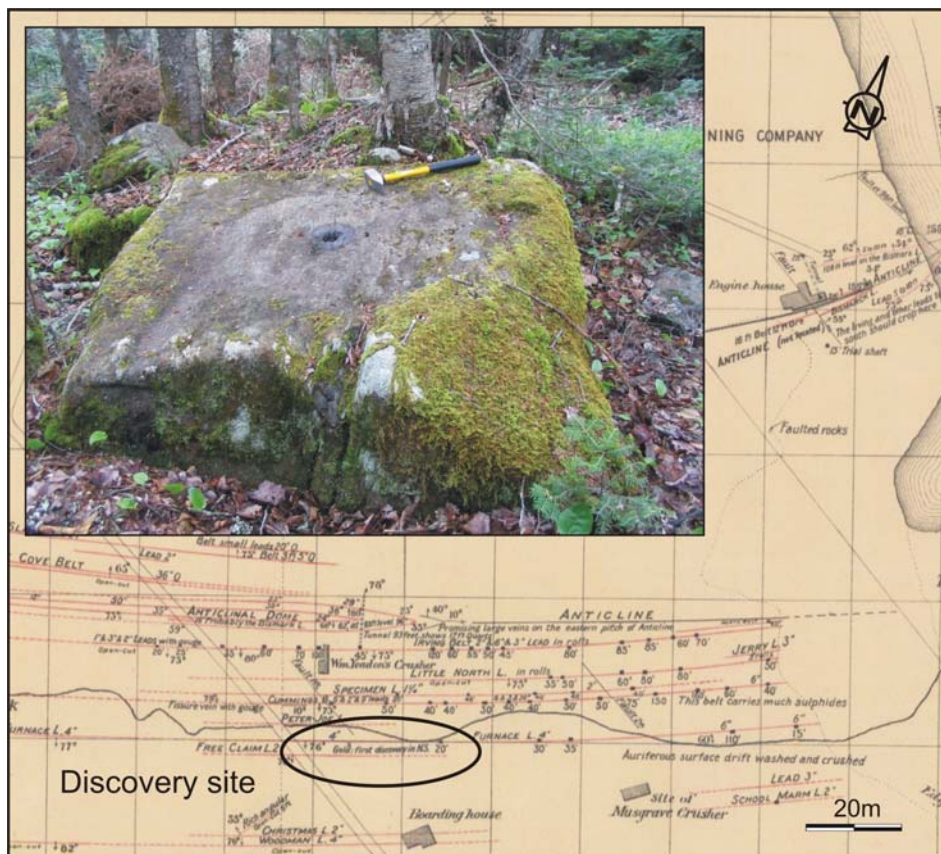


Figure 1. Excerpt from E. R. Faribault's 1899 Mooseland Gold District map (GSC Map #648) showing the location of the "Gold: first discovery in N.S.". Inset is the rock base of a primitive aarastra crusher used by early workers at Mooseland.

land took them to Jeddore, inland via boat to the head of Lake Charlotte and then cross country on foot east through wilderness for 29 km to the find, a small, east-flowing stream into the Tangier River (Fig. 1). Howe's written comments on the trip showed that he did not put much credence in the significance of the find. At the head of Lake Charlotte they met 11 prospectors on their way to the site and at the site there were already about 100 prospectors at work. The next day another hundred arrived and when Howe left they passed another 60 men. All this was within a week or two of the original find. Howe assembled all those present and stated that the Crown intended to maintain order and organize the mining rights via a staking system. A govern-

ment representative remained on site to adjudicate activities and survey a preliminary staking system of 20x30 ft. claims using the stream as a baseline.

A lot happened in the year following Howe's Mooseland visit. The Tangier, Waverley, Ovens, Lawrencetown, Goldenville, Wine Harbour, Gold River and Isaacs Harbour gold districts were discovered. Howe's early pessimistic opinion of the gold potential also changed to one of exuberance. In fact, so much was thought of the province's gold potential that Queen Victoria's son, Prince Alfred, made a visit to the gold workings at Tangier in October 1861. Nova Scotia had come of age as a *bona fide* gold producer.

G. A. O'Reilly

Macleod Resources Donates Red Marble Blocks for Monument to Honour Bathurst Basketball Team

A tragic highway accident in January 2008 claimed the lives of seven members of the Bathurst High School boys' basketball team. As the city in northern New Brunswick struggled to cope with this loss it became apparent that a fitting memorial should be made for the "Boys in Red."

No stranger to generosity (see *Nova Scotia Minerals Update*, v. 24, no. 3), Chris Trider, President of Nova Scotia's Macleod Resources, agreed to donate seven blocks of red marble for the Bathurst memorial. The blocks were cut and polished by the company and shipped in August 2011 (see photos below). Although the company has not sought publicity for this donation, the Mineral Resources Branch would like to acknowledge Macleod Resources. For a small company, this was a huge donation for a great purpose.

Garth DeMont



July - September 2011 Open Assessment Reports

Report Number	NTS	Licensee
AR ME 2009-064	11E/01D 11E/08A	Acadian Mining Corporation
AR ME 2009-065	11D/16C	Acadian Mining Corporation
AR ME 2009-066	11D/14C	Acadian Mining Corporation
AR ME 2009-067	21A/07C	Hiltz, K R
AR ME 2009-068	20O/16D	Rainbow Resources Limited
AR ME 2009-069	11D/15C	Alpha Uranium Resources Incorporated
AR ME 2009-070	11D/15C	Alpha Uranium Resources Incorporated
AR ME 2009-071	11E/01B, C 11E/02A, D	Acadian Mining Corporation; Annapolis Properties Corporation
AR ME 2009-072	21A/07C	Hiltz, K R
AR ME 2009-073	11F/05C	Blackfly Exploration and Mining
AR ME 2009-074	11E/01D 11F/04C	Annapolis Properties Corporation
AR ME 2009-075	11E/05C	Allen, L J; Elk Exploration Limited
AR ME 2009-076	11E/08D 11F/05C	Elk Exploration Limited
AR ME 2009-077	11E/05C, D 11E/06C 11E/08D 11E/10B 11E/11A, B 11E/12A, B 11F/05C 21H/07C, D 21H/08C, D 21H/09A	Minotaur Atlantic Exploration Limited
AR ME 2009-078	11D/15D	Bezanson, P T
AR ME 2009-079	11K/01C	Yava Technologies Incorporated
AR ME 2009-080	11F/16B, C	Yava Technologies Incorporated
AR ME 2009-081	11F/16B, C	Yava Technologies Incorporated
AR ME 2009-082	11E/02A, B	DDV Gold Limited
AR ME 2009-083	11E/02A	RJZ Mining Incorporated
AR ME 2009-084	11D/16C	Nycon Resources Incorporated
AR ME 2009-085	11F/14B	Richman, J
AR ME 2009-086	11D/16C	Nycon Resources Incorporated

Susan Saunders

Geology Matters 2011 Conference **Wetlands 101 Workshop**

October 25, 2-5pm, Harbour Suites, Westin Hotel, Halifax

Talk to experts and learn about wetlands and wetland policy and regulations

Guest Speakers

General Overview of Nova Scotia Wetlands

Randy Milton, Manager, Habitats Program,
Nova Scotia Department of Natural Resources

NS Wetland and Policy and Regulation

John Brazner, Wetland Specialist,
Nova Scotia Environment

Coastal Wetlands - Salt Marshes

Tony Bowron, Coastal Wetland Ecologist,
Director, CBWES Inc.

Wetland Compensation

Bob Pett, Environmental Analyst,
NS Transportation and Infrastructure Renewal

Wetland Roundtable: Guided Discussion with Q&A

Free Admission

Co-sponsored by the Atlantic Chapter of the Canadian Land Reclamation Association and the Mining Association of Nova Scotia

DNR Geologist Dan Utting and Geochemist Terry Goodwin Alberta Bound

Dan Utting joined the Mineral Resources Branch in 2007 and has worked since then on the surficial geology and coastal geomorphology of Nova Scotia. Dan left the branch in October to join the Alberta Geological Survey in Edmonton.

This time last year the Mineral Resources Branch announced that geochemist Terry Goodwin would be leaving the department for a one-year (unpaid) leave of absence to work in the private sector in Fort McMurray, Alberta. Apparently the lure of working in Alberta's private sector has been too strong for Terry to resist and he has tendered his resignation to the department. The absence of these geoscientists will be keenly felt in the Mineral Resources Branch, and the branch will have to do some detailed planning in order to replace the skills of these experienced professionals.

Doug MacDonald

Special Note

E-mail Notification

If you would like to receive an e-mail notice (with hot links) when new maps, digital products and publications are released, or when a new issue of the *Nova Scotia Minerals Update* is released, please send your e-mail address to minerals@gov.ns.ca.

Dates to Remember

October 22, 2011

Quarry Fest in celebration of Conrad Bros. Ltd.'s 55th year, 11 am - 3 pm, with BBQ and refreshments at 12 pm. Quarry tours, equipment demos by Atlantic Cat, displays by partners and live entertainment. Cono Dr., Exit 14-107 bypass, Dartmouth, NS.

October 24 and 25, 2011

Geology Matters 2011, Westin Nova Scotian Hotel, Halifax, NS. For more information please visit the web site: <http://www.gov.ns.ca/natr/meb>.

November 3-5, 2011

Mineral Resources Review 2011, Delta Hotel and Conference Centre, St. John's, NL. For more information please visit the web site: <http://www.nr.gov.nl.ca/nr/mines/mineral.html>.

November 6-9, 2011

Exploration, Mining and Petroleum New Brunswick 2011 conference, Delta Hotel, Fredericton, NB. For more information please visit the web site: www.gnb.ca/0078/minerals.

January 23-26, 2012

Association of Mineral Exploration BC Mineral Exploration Roundup 2012, Celebrating Our First Century of Global Discovery, Westin Bayshore, Vancouver, BC. For more information call the Roundup Hotline at 604-630-3930 or 1-877-689-5554, or e-mail roundup@amebc.ca.